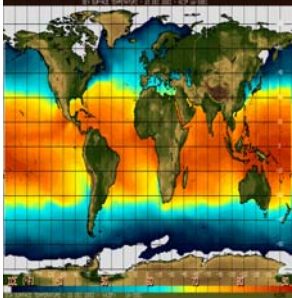


# NOAA Satellites and Information

## NPOESS Data Exploitation

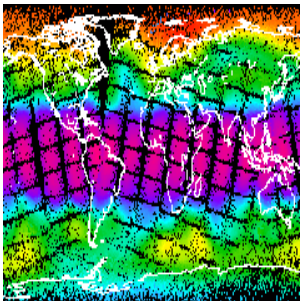
**The National Requirement:** The Nation has a need for environmental observations that will improve weather forecasting, reduce the loss of life and property, assess global climate trends, and increase economic output. Improved satellite observations from the advanced instruments of the National Polar-orbiting Operational Environmental Satellite System (NPOESS) later this decade, and from its 2007 predecessor, the NPOESS Preparatory Project (NPP), are expected to promote, protect and enhance the nation's economy, security, environment and quality of life. The instruments on NPP and NPOESS will measure details of terrestrial, oceanographic, atmospheric and space environment parameters never before detected by sensors on environmental satellites. Accurate and timely observations are essential in performing the Nation's ocean, weather and climate forecasting missions that directly protect our populace and enhance our economic productivity.



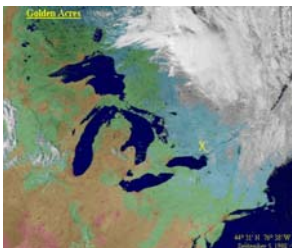
Global Sea Surface  
Temperatures



Polar Satellite Orbits



Global Atmospheric  
Temperature Soundings



North American Snow-Ice  
Extent

**NOAA's Response:** The NOAA NPOESS Data Exploitation (NDE) system will be the only link between the civilian community of satellite data users and the NPP and NPOESS systems. NDE will provide the essential data processing and dissemination systems necessary to deliver enhanced environmental observations to operational weather forecasters, government and international scientists, private enterprises, and university researchers.

New, high-speed computers and telecommunications infrastructure will be installed to handle and distribute the increased volume of data from the NPP and NPOESS missions. Automated procedures will be developed to deliver near-real time data in user-friendly formats that enhance mission support capabilities.

The NDE project will support upgrades to NOAA's data archive facility to store and provide long-term access to the unique NPOESS products. NOAA scientists will use the archived data to develop Climate Data Records.

Customer service capabilities will be established to provide a help desk and training to assist customers, such as the National Weather Service Field Offices, in understanding and implementing the enhanced environmental information within their applications.

All of these capabilities will be designed with an eye toward low-cost, efficient maintenance and upgrade. NOAA itself will exploit NPOESS and NPP, using the satellite data streams as the basis for the continuous improvement of its system engineering practices, infrastructure, software, and human assets.

By basing the NDE development life cycle on the data provided by the NPP prototype, NOAA will prepare its systems and its customers to capitalize on the benefits of NPOESS immediately upon the achievement of operational status in 2011. Therefore, NDE will effectively curtail the historical two-year delay between satellite operational status and effective data utilization.

**Partners:** The Integrated Program Office provides the NPP and NPOESS data to NDE. The NWS, NOS, NMFS, OAR, FAA, DOD, DOA and Coast Guard are the primary customers of NDE products.